1: Warner E-5 (1926-1929)1937
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313 Wood is chosen for its degree of hardness and weight and also for its shape according to the purposes of the object to be made. The main forms used are (1) long, slender, light (or heavy) shafts; (2) hollow logs; (3) roots with a well-defined arc; (4) long, straight, slender trunks with thick roots running off at a right angle from the shaft; (5) forked sticks; (6) ends of branches with many twigs and leaves; (7) any variety of dry wood; and (8) very large light wood tree trunks.

314 Three types of bark are used: (1) a long, thick, wide type found on the trunk of the larger eucalyptus; (2) thin paper-like bark from the Melaleuca; and (3) long thin fibers of root bark easily macerated.

Many varieties of leaves are technological material. They are usually [252] gathered in bundles by breaking off branches, but one large-leafed species is used singly as a plate on which to put fresh meat for cooking.

The long reeds of the water-lily ponds, spear grass particularly, and many other varieties of reeds are utilized.

237 The few animal materials used are, from land animals: kangaroo fat, kangaroo gut, kangaroo leg bones, bird feathers, bird bones (particularly leg), opossum fur, opossum gut and human hair; from sea animals: sting-ray prongs, fish and shark vertebrae, bivalve shells, and the melon shell.

Deposits of red ocher and pipe clay are mined along certain portions 317 of the seacoast. Yellow ocher is found in outcroppings. Round river 316 stones about the size of goose eggs are gathered. Diorite stones are also used. Quartzite is quarried from outcroppings. Ordinary earth and sand are used in making houses and ceremonial objects on the ground. Rock 342 ledges forming caves are utilized as shelters during the rainy season. 312 Rock basins which catch rain water are used as types of primitive cisterns to supply water in the absence of wells and fresh-water courses.

3. *General Description of Technical Methods Used in Making Raw Materials into Cultural Artifacts*

000 Only the general methods by which raw material is formed into artifacts will be discussed here. Each specific technique will be described in the section dealing with the articles manufactured.

412 The chief tools used with food are the ground stone axe,[4] a knife (formerly made of bone, but, since the Malay contacts, of iron), and a variety of bivalve shell.

322 Cylindrical wooden articles are made by cutting down a tree or

[4] The iron tomahawk is now used in its place.

3: Mountford E-5 (1948) 1956 Oll7 Murngin Oll7

THE ART OF YIRRKALLA

The Fresh-water Goanna, Bijr, and Yellow Ochre

At Guruŋga, Caledon Bay, the mythical fresh-water goannas, *bijr*, when digging out their nesting burrows, discovered both black and yellow ochres. During creation times a *jiritja* mythical man, *W'irili*, also excavated the ochres with a digging stick. When the men of the *jiritja* moiety go to Guruŋga to collect these ochres they must approach the totemic place by crawling along the ground and, while digging out the ochre, use only a special ceremonial stick, called *kainina*.

On Pl. 118A the vertical lines of lozenge-like designs[38] symbolize the yellow ochre at Guruŋga. At *a*, and *b*, in the lower panel, are two digging sticks, *kainina*, which in mythical times were used only by the man *W'irili* and today only by the men of the *jiritja* moiety when digging for ochre. *W'irili*'s tracks are shown at *c*, on the lower right. In the next panel, *d*, is a large tree, *gäinjo*, in whose branches a night-bird, *karawak*,[39] is eating the fruit of the tree. Beside the trunk of the tree is the fresh-water goanna, *bijr*, which once dug for ochre in the same place as the man, *W'irili*. The central cross-hatched band, *e*, is a hole in the cliff where *W'irili* was unsuccessful in his search for ochre.

Plate 118C shows the goanna, *bijr*, at the bottom of the painting. Above and on either side of the reptile the designs represent the black and yellow ochres. The two ceremonial digging sticks are shown on the extreme right and extreme left of the lower panel.

Plate 118D pictures six mythical fresh-water goannas, *bijr*, which lived at Guruŋga, Caledon Bay.

Plate 118B is a bark painting from Milingimbi which depicts ten fresh-water goannas, *bijr*, at Guruŋga. This painting is included to show the stability of this totemic design over a wide area.

The Fresh-water Tortoise, Mimalu, at Kulwitji Lagoon, Koolatong River

The *jiritja* mythical fresh-water tortoise, *mimalu*, has a number of totemic places in north-eastern Arnhem Land. One myth, engraved on a smoking pipe, Fig. 591D, deals with *mimalu* at Calabalbai, south of Milingimbi. Others deal with a painted coffin, Pl. 105B (*mimalu* at Milingimbi); a painted bull-roarer, Pl. 144A, B (*mimalu* at Diawirinja, west of Arnhem Bay); a Milingimbi bark painting, Pl. 126A (*mimalu* at Jaraga, a forest area near Arnhem Bay), and the subject of this painting from the Kulwitji lagoon on the Koolatong River. The most complete myth is that associated with the engraved pipe, p. 391.

This painting, Pl. 119A, deals with the totemic lagoon of *mimalu* at Kulwitji. In panel *a* is the fresh-water tortoise, the meandering lines at its tail being the wake it creates when swimming. The diamonds and dots occupying the rest of the panel are the bubbles rising to the surface of the water as the tortoise feeds

38. This is one of the designs of the *gunmitj mala*, Fig. 61M.
39. Myth of *karawak*, the night-bird, and the opossum, p. 382.

3: Mountford E-5 (1948) 1956 OI17 Murngin OI17

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male, left, is entering it. The background design[78] represents the fallen leaves of an unidentified palm. The symbols in panel *c* represent the fallen leaves of the same tree. In panel *d* the male and female goannas are travelling in the one direction. The background is the same as elsewhere, fallen palm leaves.

The Man, Oijal

This myth has already been related in association with the relevant bark paintings of *Oijal* and his sister, *Neri-neri*.[79]

The design on this pipe, Fig. 62B, belong to a large hill, Tjiruru, the totemic place where *Oijal* cooked his honey. The two groups of long parallel lines, *f*, *f*, in the left-hand panel symbolize the river, Wandaraui, which was created when the brother and sister felled a tall tree in their search for honey. The sloping lines, *b*, *b*, are the subsidiary streams that run into Wandaraui River, which, in turn, empties its waters into Melville Bay. The small gutters made in the surrounding plains by the wet-season floods are shown by the marks *c*, *c*. Lines *e* indicate the hill, Tjiruru, the totem place of *Oijal* and *Neri-neri*. In the right-hand panel, the groups of crescent-shaped lines, *a*, *a*, picture the boomerangs of *Oijal*. The transverse marks on the boomerangs are lines of paint.

The Fresh-water Goanna, Bije

[317] The fresh-water goanna, *bije*, found yellow ochre near a stream at Gurunga, a few miles south of Caledon Bay. Since then the men of the *jiritja* moiety have visited that place to collect their ochres.[80]

In panel *c*, Fig. 62C, the fresh-water goanna is lying among the rocks and water of his totemic place. The designs with the transverse bars in panels *a*, *c*, and *d* symbolize the fresh water running between reefs of yellow ochre (the blank spaces). The groups of parallel lines at *b* indicate where it is possible to ford the stream. Panel *d* shows where the stream, discovered by the water-goanna, enters the ground and disappears.

The Man, Ngulamung, Blue Mud Bay

The myth of this *jiritja* pipe centres round the mythical man *Ngulamung*, who frequented the swamps in the *mularaja* clan country, at Blue Mud Bay, to collect water-lily bulbs, *jouku*. As *Ngulamung* collected the bulbs, he put [252] them in a carrying-bag, took them to his camp and, raking back the embers, buried the bag, bulbs and all in the hot sand and ashes.[81] Two other totem creatures are included in the engraved design, the toredo worm, *kaulu-warak*, and the fish, *bununba*.

Fig. 62D is the complete design of the pipe. In panel *a* are two fresh-water fish, *bununba*, the meandering lines originating at the tail of the upper fish

78. This is similar to the *mata* design of the *ngrimil* language group of Arnhem Bay, Fig. 61F.

79. Myth, p. 282. 80. See myth, p. 371, also bark painting, Pl. 118B.

[253 177] 81. The aborigines claim that this method of cooking water lily bulbs was used in times past. It has been discarded in more recent years.

9: Thomson E-5 (1935-1943)1949
OI17 Murngin OI17

is no pooling of resources; each collects food independently, working for her own family or family group. And again, as they travel, the women gather any materials they chance to find which may be of use later, in technology. In this way the people accumulate a reserve of string, fibre, (in various stages of manufacture), resin, bone for making of yam knives and awls, for domestic use, or for canoe and bark trough manufacture, and all the materials regularly used in technology. These are carried in the *bäti*, generally in the form of neat parcels wrapped in *bärrukälla* (*Melaleuca* bark). When the men make a chance visit to an area famed for its spear woods, pigments, or other special material, they gather this and carry it in reserve, for later gift or exchange purposes. Similarly, feathers or down (*rämmän*) of birds are collected, and *bulnyin*, the fur of the Brush-tailed Possum, which is valued also for ceremonial purposes, is stripped before the animal is cooked. The spines (*dimir*) of stingrays are also extracted and all materials useful for technological and ceremonial purposes are removed while an animal is being prepared, wrapped in neat parcels in paperbark and placed in the dilly bag until required for use. As this material is generally carried by the natives in their baskets when they are hunting, they are able to make use of any moments of leisure during a halt, or while food is being cooked, to repair and maintain implements and utensils.

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Certain materials, particularly the fat of *kärritjämbäl* the Red Kangaroo, and of a few other animals, and the fat and feathers of some birds, chief of which are the Emu, Plain Turkey or Bustard, the Jabiru and Native Companion, which are difficult to approach, have a high "social value" and are greatly prized. These materials have a ritual sig-

237 [435] 778

9: Thomson E-5 (1935-1943)1949
OI17 Murngin OI17

of special types and very local in occurrence, come to be distributed throughout the whole of this great territory? And how, again, are pigments and ochre—*miko*, (red), *butälläk*, (yellow), and *raitpa*, a reddish-purple pigment with a metallic sheen which is used especially for ceremonial purposes—which occur in deposits localised in certain clan territories, distributed throughout the whole area? Why are these pigments and other materials not guarded as jealously as the patterns in polychrome and retained in one area instead of being so widely dispersed?

Each individual in Arnhem Land is the centre of a great ceremonial exchange cycle. A man calls the people of all those groups to the east and north-east of himself, naming them from the class of *gerri* which characterise them, *kumur miwait*; those to the north *kumur muadäk* (*muadäk*, the generic name for all calico or fabric), to the south-west and south, *kumur kärin* (inside), to the west and north-west, *kumur kätjirk*, and those to the south-east and east, *kumur djalk* (paperbark sheath used for *ŋämbi lirra*—literally the "tooth" or head).

Kumur is really the breastbone or sternum, but a hill is also *kumur* or *buku*, and *kumur* is used again to denote direction, aspect, and hence, the quarters within the ceremonial exchange cycle. Each individual within this great cycle has friends of a type called *kumuryanna märnda*, really "breast to breast those two". This expression is used of friends who are partners, who stand opposite one another and exchange gifts or *gerri* within the exchange system, and between whom is carried out a life-long system of ceremonial exchange. These relationships, which go by the general title of *kumur märnda*, are sometimes very complex, sometimes simple. Certain types of gifts characterise each of the groups (and indeed in at least two